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ABSTRACT

This paper argues for the legitimacy of a paragraph as a linguistic unit. The arguments are based on: (1) the rule of pronominalization that makes crucial use of the paragraph; (2) establishment of surface constituent structure of the paragraph as evidenced in an analysis of the structures of recipe and medical discourses; and (3) postulation of deep paragraph structure, as evidenced by an analysis of a descriptive discourse of cartoon strip and by an ambiguous discourse whose interpretation is solely dependent on paragraphing. (Author/CFM)

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PARAGRAPH, IS IT A LEGITIMATE LINGUISTIC UNIT? -- A CASE STUDY FROM ENGLISH AND JAPANESE*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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The present paper is an attempt to support the thesis that the paragraph is indeed a legitimate linguistic unit that comes between the sentence and the discourse. The paper is based on my introspection and on my recent exploratory experiments on written discourse. Needless to say, I am not the first to argue for the paragraph in written discourse. In rhetoric the notion of paragraph has long been regarded as one of the most important units in discourse. However, it remains true that in rhetoric the validity of the paragraph has been taken for granted. In other words, rhetoric has accepted the paragraph as a practical necessity in spite of the fact that it has never 'explained' its real characteristics in descriptive terms.

In linguistics the notion paragraph did not show up even in the Bloomfieldian descriptive linguistic theory. His major concern has been to analyze nothing more than levels of phonemes through sentences via morphemes. In a word, his theory was sentence-bound. Chomskyan linguistics, too, has concentrated on the transformational-generative explanation of sentences. The maximum unit in that theory has definitely been the sentence. It is only in the past few years that the theory began to go beyond the

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boundary of the sentence so that it can account for phenomena such as pronominalization, relativization, topicalization, clefting, passivization, reflexivization and others in more natural linguistic terms. Yet, to my knowledge, no transformational-generative literature that deals with discourse analysis has so far provided us with linguistic account of the paragraph.

Kantor (1977) who deals with pronominal cohesion does not refer to the level of the paragraph, despite the fact that pronominalization does interact with the paragraph in an interesting way. Thus, for example, Halderman's account of the Watergate affair as it appeared in Newsweek (February 27, 1978 p. 53) as excerpts from his original The Ends of Power is using the protagonist's name in each new paragraph in the first sentence if necessary, and it changes into a pronoun in the rest of the paragraph, as exemplified by the following:

(1) My own perception had always been that Nixon simply began to erase all of the Watergate material from the tapes when he started to worry that they might be exposed.

But Nixon was the least dextrous man I have ever known--especially at operating tape recorders. Once, he decided to make a practice of dictating his thoughts and reactions during evenings and on weekends. So he instructed me to obtain several tape recorders for him to use at Camp David, San Clemente and Key Biscayne.

This turned into a major project because Nixon just couldn't get the buttons straight. We tried to

find the simplest tape recorder, and even then we had to specially mark the various buttons so that he could record without mixing things up.

So I believed that Nixon had started trying to erase the tapes himself, but realized it would take him ten years. The investigators counted at least five different starts in the 18 1/2 minutes alone.

But now I'm confused, because of the way Nixon referred to that 18 1/2-minute gap in a telephone call after I resigned: "Rose's eighteen minutes."

(Underlined by SM)

In other words, in a certain type of written discourse (which I cannot specify now) a thematic figure can hardly be pronominalized across the boundary of each paragraph. This fact alone seems to shed doubt on the view that the paragraph is not a crucial unit in the theory of discourse. My speculation is that there might be more grammatical rules that use the paragraph as a crucial unit.

Jones (1977) has used the paragraph in her experiments of identifying themes in discourse to which various ordering operations have been applied, the two of which being "total sentence reversal"[1] and "paragraph reversal."[2] She has successfully used the paragraph as a relevant unit in her experiments. But nowhere in her book can I find any definition of the paragraph. What she did is to confirm the tagmemics' position in her criticism of Halliday & Hasan (1976).

> I object also to the Halliday and Hasan claim that units such as paragraphs and discourses have no (grammatical) constituent structure. They believe that these paragraphs and discourses are fundamentally different kinds of linguistic things than words, clauses, and sentences. Tagmemics makes the opposite claim: that they are the same type of linguistic things: words, clauses, sentences, paragraphs, and discourses are simply at different hierarchical levels of organization. Tagmemics states that there is constituent structure at each of these levels. (p. 86)

Jones referred the reader in the footnote 39 of Chapter 3 to Bayless & Johnson (1976), an unpublished manuscript which she says has given several arguments for the constituent structure of paragraphs and discourses, but so far I haven't had a chance to look at it.

Halliday & Hasan (1976) do admit that the paragraph is a semantic unit, if it is void of any constituent structure which exists on the linguistic levels of sentences, phrases and words (morphemes). They state:

> ....Some writers in particular seem to achieve a sort of periodic rhythm in which there is a regular alternation between tight and loose texture. In this connection we see the importance of the paragraph. The paragraph is a device introduced into the written language to suggest

> this kind of periodicity. In principle, we shall expect to find a greater degree of cohesion within a paragraph than between paragraphs; and in a great deal of written English this is exactly what we do find. (pp. 296-297)

Now, let me proceed to discuss some of my exploratory experiments designed to examine the nature of the paragraph. The subjects were twenty American native speakers of English and twenty native speakers of Japanese. Due to the limited length of this paper I can discuss (or refer to) only a few of the entire experiments, namely the ones dealing with the following discourses: (1) recipe (Appendix 1) (2) medical diagnosis (Appendix 2), and (3) cartoon description (Appendix 3).

For the recipe discourse the subjects were asked to identify acceptable and unacceptable paragraphings from among the suggested paragraphings given at the end of the discourse, and to show the degree of acceptability of those they rated as acceptable. The results were as follows:

	highly acceptable paragraphings		least acceptable paragraphings
Japanese	*D > A > F		> C
	(95%) (80%) (75%)		(25%)
English	D > *F > A		> E
	(94%) (88%) (83%)		(17%)

Note: *D and *F were chosen as the most acceptable paragraphings.

Why are Japanese C and English E rated as the worst by the subjects? I should know the reason as the experimenter, simply because I made up the particular paragraphing patterns in such a way that those suggested paragraphings cut off a chunk of discourse which has both grammatical and thematic cohesion of extremely high degree. More specifically, in the Japanese recipe discourses, SS 4-7 deals with "flour sifting" as a theme which is grammatically marked by the anaphoric usage of the noun kona-wa (flour-theme marker). In exactly the same token, SS 15-16 share the theme of "cream whipping" signaled by the repeated noun phrase nama kuriimu-wa (whip cream-theme marker).

In the English recipe discourse, the assignment of different paragraphings to SS 2 and 3 or SS 7 and 8 violates thematic unity of "pan" and "egg whites" respectively. Since English recipe discourses normally lack the definite article, the anaphoric relationship is represented by lexical repetition as in "pan" of SS 2 and 3. The cohesion between SS 7 and 8 is marked by a zero-pronoun (as the direct object of "let stand") and its coreferential noun phrase "whites".

The most acceptable paragraphings for the subjects are those which keep intact the thematic and grammatical cohesion of each suggested fragment of the discourse. The Japanese paragraphing D partitions the entire discourse into /prologue/ /pre-baking/ and /post baking/ in a very neat fashion, and the English paragraphing D, into a bit less neat /preparation/ and /sifting/.

Generally, it is next to impossible to paragraph a discourse chunk into two paragraphs when local cohesion in terms of phoricity is of high degree. To say the same thing from a different angle, one can say that the paragraphing very likely takes place if given two sentences do not show any local cohesion, as between SS 3 and 4 in both Japanese and English recipes. I have used the term local cohesion as against the global cohesion. The distinction seems necessary, because any given two sentences in one discourse are at least unified by global cohesion, if not by local one.

In their passive choice of paragraphing a few subjects--25% and 17% for Japanese and Americans, respectively--have made choice of C for Japanese and E for Americans as acceptable ones, but none of those subjects have paragraphed that way, when they were asked to give their own paragraphing.

Let us move on to a different discourse--a discourse of medical diagnosis. The subjects were asked to do the same thing that they did with the recipe discourse. The subjects' rating was as follows:

	highly acceptable paragraphing		least acceptable paragraphing
Japanese	*B (100%) > A (75%) ≒ D (75%)	.....	> E (25%)
English	*D (88%) > B (61%)	.....	> C (16%)

Note: *B and *D were chosen also as the most acceptable paragraphings.

It is really worth examining Japanese paragraphing B because all the twenty subjects unanimously rated B as an acceptable paragraphing. The first paragraphing (SS 1-10) is thematically coherent in that it deals with "symptoms of measles." And no grammatical cohesion is damaged by separating SS 10 and 11. The second paragraphing (SS 11-16) is also thematically extremely homogeneous because it focuses entirely on "physical environment for the patient." So here again no grammatical coherence is at stake by separating S 16 from S 17. The third paragraph (SS 17-20) corresponds to the local theme of "food for the patient." The last two paragraphs, namely SS 21 and 23, are separate paragraphs, because S 22 starts with the demonstrative pronoun kono (this) referring to the entire stages of measles. The pronoun cuts off the grammatical cohesion between S 21 and S 22.

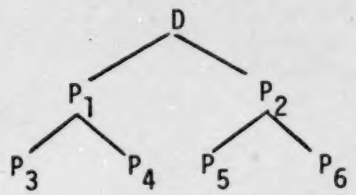
Now, why didn't my subjects' choice coincide with the paragraphing D which happens to be the one used by the original author, even though D, too, is endorsed by 75% of the subjects as acceptable? Why is another paragraphing pattern A which has only two paragraphs (SS 1-10 and SS 11-22) chosen by 75% of the entire subjects as acceptable? As a matter of fact similar questions can be raised with the recipe discourse, too. Does all this mean that the paragraph is not a legitimate unit?

Tokieda (1960 pp. 72-76) claimed that the surface paragraph structure of a discourse is more or less like the configuration of sentential immediate constituent structure very similar to the

tree structure of Diagram 1.

D=Discourse

P=Paragraph



(Diagram 1)

Tokieda's claim seems farily reasonable, not only because my recipe and medical discourse analyses are representable by such immediate constituent structure, but also because there is a paragraph that consists of only one sentence, and such paragraph is indeed subject to the IC analysis. I claim with Tokieda that the surface paragraph does have a constituent structure.

The diagram (1) implies that there are five possible ways to paragraphing D; they are (1) /D/ (zero paragraph) (2) /P_1/P_2/ (3) /P_3/P_4/P_2/ (4) /P_1/P_5/P_6/ (5) /P_3/P_4/P_5/P_6/. But there is no such paragraphs as # /P_3 P_4 P_5/P_6/, # /P_3/P_4 P_5 P_6/, and # /P_3/P_4 P_5/ P_6/. And those unacceptable paragraphings will reveal the nature of the acceptable paragraphs, as I have discussed in connection with the recipe and medical discourses. The choice among the possible paragraphings is still in large measure mysterious, but I just want to suggest some plausible factors involved; (1) genre of the discourse in question (2) the sex (and other factors such as age, socio-economic status, educational background etc.), (3) the language

being used (i.e. culture-bound factor) and (4) stylistical factors (rhythm, spatial arrangement, etc.). The burden to prove these is upon me in my future research.

Let me touch upon the parallelism between the sentence and the paragraph. A given single sentence such as "the dog ate meat" is subject to phrasing like /the/dog/ate/the/meat/, /the dog/ ate the meat/, /the dog/ate/the/meat/ but never to phrasing like # /the/dog ate/the/meat/ nor #/the/dog/ate the/meat/. One could argue that the paragraphing is a special instance of more general phenomenon I call phrasing. If it is true that a sentence has an underlying structure (as I believe it does), then a paragraph, too, should have an underlying structure. Not only that, it should strike us very strange if the surface paragraph does not have corresponding deep paragraph, because otherwise one could not explain the phenomenon of a single sentence-paragraph. One would have to say illogically that only when a single sentence is a paragraph the particular sentence does have an underlying structure. In addition to my argument, Chafe's (1977) analysis of stored knowledge also seems to suggest that there is such a thing as Deep Paragraph Structure.

The next experiment I discuss is designed to test if there is any other deeper (if not the deepest) level than the surface level for each superficial paraphrasing. In this experiment, the subjects were asked to make a story out of the four-boxed cartoon strip. The subjects were presented four non-verbal, major events (each

corresponding to each of the four boxes) before they verbalize the content of the cartoon. In other words, in the pre-verbal stage were the four distinctly compartmentalized ideas that correspond to ki (Introduction), shō (Follow-up), ten (Transition) and ketsu (Conclusion), in that order, to use classical Chinese (but very universal) concepts of discourse development.

It is amazing that in no surface stories by my subjects reflect such four-partite structure of the original cartoon strip in terms of the paragraph structure. Indeed there were four-paragraphed stories, one for each in English and Japanese stories, but there are no one-to-one correspondence between the paragraphs and the I, F, T, C. Observe the following English example:

(2) A man with a very sensitive head was walking down the street just after he had taken his usual morning dose of aspirins--too many.

As he passed under a chestnut tree, a round, heavy, thorny chestnut fell from one of the upper-most branches and embedded itself into his bald, unprotected scalp. He did not even have time to hear himself scream; he passed out in anguish.

A nurse ran up to him and bandaged what she thought was a particularly acute bump on the head. Actually she merely fastened the chestnut onto his head with bandages.

When the angel of mercy left, the man was still unconscious. He will probably never know the identity of

his benefactress.

The basic unrelatedness between the initial non-verbal stage and the verbal output seems to indicate that the surface paragraph structure might be derived at least from some non-superficial, shallow structure. I do not know exactly how the derivation takes place, but the fact remains that the diverse surface paragraphs fall within the predictable range; none of them ignores the original I-F-T-C order of events.

The idiosyncratic features in paragraphing the cartoon can be summarized as follows:

(a) 50% of the American subjects verbalized I in their first paragraph, but only 12% of the Japanese subjects did so.

(b) While 25% of the Japanese subjects have made a surface paragraph out of T, none of the American subjects did so.

(c) 35% of the American subjects have combined F and T into one paragraph, but only 6% of the Japanese subjects have done so. On the other hand, 25% of Japanese subjects have combined I and F into one surface paragraph. None of the American subjects have done that.

(d) Both American and Japanese subjects (about 20% of them) have written a prologue paragraph which is only remotely related to I, but the Japanese subjects have written epilogue paragraphs about twice as much as

the American subjects.

(e) Only some Japanese female subjects have made both prologue and epilogue into independent two paragraphs.

Next I will discuss more straightforward evidence that there can be such a thing as the deep paragraph structure. Consider the following discourse:

(3) John pays a great deal of attention to his health. He takes all sorts of preventive measures. He seldom rides a car. He just walks most of the time. He doesn't smoke cigarettes which he believes are harmful for his health. He drinks a little, but not too much. He is partially a vegetarian, and does not eat too much meat. He very seldom sees his doctor.

Normally the paragraphing is determined for some stylistical reason (among others). For example, in order to make the first two sentences of (3) stand out one can turn them into an independent opening paragraph. Such paragraphing I will call stylistical, optional paragraphing. In (3), however, to include the underlined last sentence in the preceding paragraph or to exclude it has to do with deep semantics. Thus, if it were included, the sentence can be followed by (4a); otherwise by (4b).

(4) (a) It is simply because he just doesn't believe in a doctor....

(b) It is simply because he has never become ill....

In other words, the last sentence is ambiguous as to whether it is a part of John's preventive measures for his health or result of his health care. Such a non-stylistical, obligatory paragraphing has to have an analogue in the deep discourse structure. Otherwise it would be extremely difficult to account for the ambiguity of the one and the same sentence.

I have now come to the last paragraph of this paper. Summing up my discussion so far, I think I have shown that the paragraph is a grammatico-semantic unit of a surface constituent structure and also very likely is a grammatico-semantic unit of a deep constituent structure. Granting the fact that there is a one-sentence paragraph, we are dealing with a continuum of paragraphs that range over the different degree of grammatico-semantic nature. I also would like to suggest that the kind of deep paragraph structure I have discussed can be closely tied in with the manner in which we organize our thinking at the pre-verbal stage.

Appendix I

English Recipe Discourse

(1) Start oven at moderate (375°F.). (2) Have ready 10-by-4 inch tube pan. (3) Don't grease pan. (4) Sift flour and 3/4 cup sugar together 3 times. (5) Separate eggs carefully. (6) Drain off whites into measuring cup to make 1 1/2 cups egg whites. (7) Let stand at room temperature 15 minutes or longer. (8) Beat whites with cream of tartar and salt in mixing bowl or in electric mixer until frothy. (9) Beat in remaining sugar, 3/4 cup plus 2 tablespoons, a little at a time, beating for 10 seconds after each addition using medium speed on mixer. (10) Continue beating now at high speed on mixer, until meringue is firm and holds stiff points when whip is pulled out. (11) Fold in flavorings. (12) Sift flour-sugar mixture, about 3 tablespoons at a time, over meringue. (13) Cut and fold gently with wire whip until flour-sugar mixture disappears each time. (14) Use rubber scraper and push batter from mixing bowl into tube pan. (15) Spread and level batter against tube and sides of pan. (16) Cut through batter gently with a knife. (17) Bake 30 to 35 minutes or until no imprint remains when finger lightly touches top of cake. (18) Invert cake immediately, placing tube over up-turned funnel on kitchen table. (19) Let hang until cold. (20) Remove cake from pan. (21) Frost as preferred. (22) Makes 8 or more servings. (23) Delicious with a rich dark chocolate frosting. (24) Handsome with white boiled frosting or a lemon- or orange-flavored pour-on frosting. (25) Try serving it with old-fashioned

wine jelly. (Amy Vanderbilt's Complete Cookbook 1961 Doubleday, 105-107.)

Suggested Paragraphings:

(A) /1/, /2-3/, /4/, /5-8/, /9-11/, /12-16/, /17-21/, /22/, /23-25/

(B) /1-17/, /18-22/, /23-25/

(C) /1-4/, /5-11/, /12-16/, /17-22/, /23-25/

(D) /1-3/, /4/, /5-16/, /17-22/, /23-25/

(E) /1-2/, /3-4/, /5-7/, /8-11/, /12-13/, /14-22/, /23-24/, /25/

(F) /1-3/, /4/, /5-11/, /12-16/, /17-22/, /23-25/

Translated Japanese Recipe Discourse[5]

(1) Angel cake, also known as silver cake, is made only by egg whites and soft and very delicious. (2) Try when you have egg whites left over from your previous cooking. (3) For the occasion like Christmas, its pure white will please your guests. (4) When all the materials are ready, sift flour at least four or five times. (5) Sift sugar about twice. (6) The more you sift flour, the softer and lighter cake will get. (7) Sift flour as many times as you can, because we want cake as light as possible. (8) Put some tartar in egg whites, and beat lightly. (9) When it gets frothy, add sugar gradually and beat continuously. (10) Add vanilla and sift in flour and mix with spoon quickly. (11) Grease pan (a ring-shaped pan to be used for this time), and put batter into pan, then, bake 40 to 45 minutes at 300^{o}C. (12) The most important thing is to be careful not to burn cake. (13) Keep in mind to see

if properly heated: In order to keep the snow-white color, bake lightly. (14) When baked, cut across cake and put whip cream in between. (15) Add sifted sugar so that whip cream will be smooth. (16) Too much beating makes whip cream separable; beat whip cream lightly in cool place. (17) Delicious with some chestnuts in whip cream. (18) Spread rest of whip cream thick on cake. (19) Spreading silver decorations over is preferable for the time like Christmas. (20) Also placing apple candle stand in the middle of cake and decorating with holly leaves will make cake very suitable for Christmas. (Katēi de dekiru wa-yō gashi. 1960, Fujin no tomo sha, 36)

Suggested paragraphings:

(A) /1-2/, /3/, /4-7/, /8-10/, /11-13/, /14/, /15-16/, /17/, /18-20/

(B) /1-13/, /14-20/

(C) /1-5/, /6-10/, /11-15/, /16-20/

(D) /1-3/, /4-10/, /11-20/

(E) /1-2/, /3/, /4-7/, /8-10/, /11-14/, /15/, /16-17/, /18-20/

(F) /1-10/, /11-20/

Appendix II

English Medical Discourse

(1) Measles have been one of the most frequent of the childhood diseases. (2) The condition is quite infectious, and is accompanied usually by a rash, with fever, cough, and inflamed eyes. (3) Measles are caused by a specific virus which spreads easily from one person to another. (4) From ten to fourteen days after a child has been in contact with another who has had measles, symptoms, like those of a severe cold develop. (5) The child becomes drowsy and irritable. (6) The eyes water and look red and the child avoids light. (7) The appetite is poor. (8) By the end of the third or fourth day the rash appears with individual spots that are at first pinhead size and pale red but then enlarge, become elevated and a darker red. (9) The eruption is seen first usually on the face, scalp, and behind the ears, but then gradually covers the whole body. (10) The fever increases as the rash breaks out. (11) After the second or third day the rash begins to fade, the temperature falls and after seven days, usually, the patient is on the way to complete recovery. (12) During the first few months of life the child often has immunity from measles by antibodies derived from its mother. (13) As the immunity wears off the child becomes susceptible, and most cases occur in children three or four years old. (14) The child may be injected with globulin which provides immunity against measles. (15) In

1962 a vaccine useful to prevent measles was developed by Dr. John Enders based on isolation of the measles virus. (16) Since the development of antibiotic drugs secondary complications of measles are more easily controlled. (17) During the acute illness the child is kept at rest, given plenty of fluids, such as citrus drinks, a soft diet and good nursing. (18) For itching of the skin a calamine lotion is used. (19) The eyes are protected against irritation. (20) For more severe cases convalescent serum or gamma globulin may be used. (21) Measles are not a serious disease except for very small babies. (22) Prevention and control of pneumonia at the earliest sign is most important. (Fishbein, M. 1956 The Handy Home Medical Advisor. Doubleday, 134-135)

Suggested paragraphings:

(A) /1-2/, /3/, /4-11/, /12-13/, /14-15/, /16-18/, /19-22/

(B) /1-3/, /4-11/, /12-15/, /16-22/

(c) /1-3/, /4-5/, /6-7/, /8-10/, /11/, /12-13/, /14/, /15-16/, /17-19/, /20/, /21/, /22/

(D) /1-11/, /12-15/, /16-22/

(E) /1-3/, /4-7/, /8-10/, /11/, /12-13/, /14-15/, /16-17/, /18-20/, /21-22/

(F) /1-15/, /16-22/

Translated Japanese Medical Discourse[5]

(1) Measles are one of the infectious diseases designated by law and are frequent in early spring. Those who have had measles once

are immune from measles ever afterward. (2) There are four stages; incubatic, prodromal, eruptive, and convalescent. Symptoms develop from ten to fourteen days of latent period after a pathogenic virus infect body through coughs and saliva. (3) Three or four days following the incubatic period is the prodromal stage; the patient has a hacking cough because of a rash in the throat, the eyes look red, puffy, and are irritated by light. (4) As measles accompany high fever and frequent sneeze, they are often suspected as coryza. (5) Two or three days before the eruption, if you look carefully you can see red spots with white points inside the cheeks. (6) These spots are the prominent marker of the measles, but when the eruption begins, they disappear. (7) As the rash breaks out, high fever continues for three or four days. With slight abatement in the temperature, the eruption begins; from pinhead size to bean size rose-colored rash appears first on the face, behind the ears, on the neck but then gradually covers the whole body. (8) After about three days, the rash will reach its peak but soon begins to fade and turns into dark brown. The fever runs highest during this period. (9) If the measles does not cause any complications, the measles are healed completely after seven to ten days from the onset of the eruption. (10) However, different from other skin disease, the measles need careful treatment; otherwise they may retrocede and cause a complication such as the pneumonia or the tympanitis. (11) A sickroom should be kept clean, drapes should be

used and the light should be placed behind the patient's head so that the direct rays will not fall upon the face and protect the eyes against irritation. (12) The room temperature should kept around 70°F., and let the patient sleep in a warm condition by using a hot-water bottle and light weight warm blanket. (13) Be careful not to raise the room temperature too high, because in many cases high temperature makes the patient sweat and get cold or fall into convulsions. (14) If it is a warm season, cool the room; if the fever is high, use a water pillow. (15) The retrocession does not occur by cooling the body partially. (16) But to place the patient in a cool room or to cool the whole body involves risk of the retrocession (17) Serve the patient with milk, bread, vegetable soup, thin rice gruel, pap and so on as much as the patient wants to. (18) Do not force the patient to eat when he does not have appetite. (19) When the patient is thirsty, let him have some ice cubes or cooled tea just as much as to quench his thirst. (20) It is not necessary to put the patient on a restricted diet but be careful not to give the patient too much, for too much eating may cause diarrhea. (21) The recuperation is very important for the measles; for a complication is caused easily at the end of the convalescent stage: Keep the patient in bed for a week even after the rash disappears and the fever breaks and keep him warm in home for the following seven days. (22) If the patient seems like having the measles but the rash does not appear or

if the red rash turns out to be pale, the patient breathes hard, and the fever gets higher, there is a possibility of the retrocession; so call the doctor immediately. (Ōmi, Kazuichi 1964 Shōjō kara miru kateino igaku, Shūbunkan, 430-431)

Suggested Paragraphings:

(A) /1-10/, /11-22/

(B) /1-10/, /11-16/, /17-20/, /21/, /22/

(C) /1-6/, /7-10/, /11-16/, /17-21/, /22/

(D) /1-2/, /3-4/, /5-6/, /7/, /8-9/, /10/, /11-12/, /13-16/, /17-20/, /21/, /22/

(E) /1-10/, /11-17/, /18-22/

(F) /1-2/, /3-4/, /5-6/, /7/, /8-9/, /10/, /11-12/, /13-14/ /15-16/, /17-18/, /19-20/, /21/, /22/

Appendix III

Ryūsan Aki
"Suttenkorori"

October 7,1977
Shūkan Asahi

Footnotes

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[1]Total Sentence Reversal involves "inverting the sentence order in each paragraph of the text such that the last sentence in the original became the new first sentence, the penultimate sentence in the original became the new second sentence etc." (p. 24 Underline SM)

[2]Paragraph Reversal "changes the order of paragraphs with respect to each other." (p. 25 Underline SM)

[3]All the subjects in my experiments are undergraduate or graduate students at the University of Illinois except four Americans and seven Japanese. The male/female distribution in each group was 6/14 for American subjects and 9/11 for Japanese subjects. The experiments reported here are a fraction of the entire series of experiments I conducted during the 1978 Spring semester at the University of Illinois. The detailed discussion of the entire experiments are to appear in Makino (forthcoming).

[5]The translated two sentences, if any, correspond to one sentence in the original Japanese discourse.

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